

EUROPEAN VARIETIES
OF
SILENE INFILATA
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Critical examination of a large number of examples of *Silene inflata* from every part of Europe shows that the multiplication of described forms has been both unnecessary and excessive, and out of all proportion to the variation of characters within the limits of the species. Varieties have been defined by characters which not only vary during the seasonal growth of the plant, but also vary in different parts of the same individual. Several descriptions of proposed varieties are no more than verbal transcripts of the salient characters of the common form, the only discrepancies being the varietal name and the opinion of the observer. After tabulating the differential specific characters which definitely distinguish *Silene inflata* on the one hand from *S. glareosa* Jordan, and on the other hand from *S. commutata* Gussone, it will be evident that the variable characters within the limits of the species will permit the grouping of only a few forms that can be sufficiently marked off from one another.

In England the white-bottle is gynomonecious, andromonecious, male, female, and androgynous, and the bisexual flowers are proterandrous, and the flowering period is from June to August. In the Channel Islands and in Central Italy the flowering period is from May to July, in Spain from April to August, in Greece from April to July. In Arctic Norway, according to Norman, it flowers from 7 July to 8 August. In tufts of plants in the Paris Gardens, Gay observed that the first flower opened on 24 May (1850), and all the flowers of the tuft had opened by 5 June.

S. glareosa differs from *S. inflata* in the following collective characters : — Basi fruticulosa, rhizomate in ramos multos tortuosos diviso, turiones foliosos caulesque multos humiles edente, caulibus cæspitosis robustioribus laxe adscendentibus. Folia semper parva angusta lanceolato-linearia. Bracteæ scariosæ. Calycis dentes obtusi. Petala coronata, corona breviter biloba, limbo ad basin usque bipartito, etiam ungue sub corona late alato sed inferne subito attenuato. Capsula subglobosa. Semina tuberculato-muricata, tuberculis brevibus obtusis, dorso convexa, faciebus planiuscula, magis rotundata, plerumque paullum pauciora. Tempore florendi senior.

S. commutata is also distinguished from *S. inflata* as follows : — Caules fragiles, semper adscendententes foliosi. Folia carnosula, semper lata, omnia

cartilagineo-marginata longe mucronata. Bracteæ scariosæ. Flores sub anthesi nutantes, etiam alares jam sub anthesi longe pedicellati, in cymam subcorymbosam dispositi. Calycis dentes obtusi. Semina minutim granulata nec tuberculata, dorso faciebusque leviter convexa, plerumque paullum numerosiora.

S. inflata extends to every part of Europe, finding its northern limit in lat. 70°, at Alten in the amt of Tromsö, Norwegian Lapland, a district remarkable for its rich vegetation (see Baedeker's Guide to Norway and Sweden, ed. 8, 1903, p. 258).

All the European forms of *S. inflata* may be grouped in two series, 1. those in which the whole plant is glabrous, 2. those in which the stem and leaves are more or less thickly covered with short curled hairs. Each of these two series may be subdivided into three (forming six varieties). 1. leaves long and narrow, linear, linear-lanceolate, lanceolate, and acute, 2. leaves long and broad, elliptic-lanceolate, obovate-lanceolate, obovate-oblong, and acuminate, 3. leaves short and broad, obovate-lanceolate, elliptic-obovate, broadly obovate or sometimes suborbicular, with the middle leaves even subcordate at the base and apiculate at the tip, the others mucronate, or all mucronate.

The difficulty in the examination of a large number of examples of all forms has been in sorting and sifting the described plants, eliminating the redundant and irrelevant characters, and distributing most of the forms which they represent among the synonyms, which, as might be expected, tend to increase the more closely the descriptions are applied to the specimens which exhibit an greater or less divergence from the common form. This difficulty has been increased in cases where the tendency to over-discrimination on the part of the collector in examination of specimens has not been supplemented by comparison of examples from different localities. In the grouping of forms proposed below, only those synonyms are included which result from the comparison of plants. Factitious changes of name made for merely literary reasons, being devoid of botanical interest, and of no scientific importance, are ignored and omitted, a legacy of the perennial insistence of irrational and pedantic claims of priority in nomenclature, claims which when unduly asserted encumber systematic work with an incubus as inert as it is useless.

A. Formæ glabræ.

Tota planta glabra.

Var. 1. *angustifolia* Cand. Fl. Franc. IV, 747 (1805).

Var. 2. *latifolia* Reichb. Fl. Germ. excurs. 823 (1832) : — f. *communis* *albiflora* *glaucia*.

Lusus carneiflora Le Grand (var.) in Bull. Soc. Bot. France XVI, 386 (1869).

Lusus rubriflora Cand. (var.) l. c. (1805).

f. *lætevirens*.

Var. 3. *alpina* Mert. et Koch in Ræhl. Deutsch. Flora, ed. 3, III, 236 (1831).

f. *rupicola*.

B. Formæ pubescentes.

Caules et folia pilis brevibus crispatis plusminus dense vestita.

Var. 4. *minor* Moris Fl. Sardoa, I, 246 (1837).

Var. 5. *pubescens* Cand. l. c. (1805).

Var. 6. *marginata* Maly Enn. Pl. Austriac. 307 (1848).

A few teratological forms may first of all be disposed of :

S. inflata var. *viridiflora* Cand. l. c. 747, et Prodr. I, 368. — "Paroît être une monstruosité singulière, dans laquelle le calice est devenu foliacé. à 5 lobes profonds et pointus, et les pétales sont demi-avortés, de couleur verte. Elle a été trouvée par M. Lamarck, à mi-côte sur le Mont-d'Or en montant aux sources de la Dordogne." — Syn. *Cucubalus viridis* Lamk. *Encycl. Meth.* II, 421 (1786).

S. inflata var. *castrata* Lapeyr. Hist. abr. Pyren. 247 (1813); Cand. Prodr. I, 368. — "Uno sexu petalisque abortivis."

S. venosa var. *cylindrica* Kuntze Fl. Leipzig, 231 (1867). — This seems to be merely a casual form with undeveloped floral envelopes. The single character given is "wälzlich".

S. fastigiata Wilms in Jahrb. Westfal. Prov. Ver. Wiss. Kunst. 1878, 161. — This seems to be a state with malformation of the dichasial branching.

Var. 1. *angustifolia* Cand. Fl. Franç. IV, 747 (1805), et Prodr. I, 368; Reichb. Fl. Germ. excurs. 823.

Folia linear-lanceolata vel lanceolata, acuta. Styli apice haud incrassati.

Hab. Europe : except Iceland, Norway, and Belgium. This variety is first referred to in Bauhin's *Pinax*, 205 (1623), where he mentions forms of *S. inflata* with either broad or narrow leaves, — "alia foliis latioribus, alia angustioribus et acutioribus."

Cucubalus Behen var. *angustifolius* Pers., Syn. Plant. I, 495 (1805).

Cucubalus Behen var. *maritimus* (non pl. Linneana) Wahlb., Fl. Lapponica, 121 (1812). — Refers to the plant of Swedish Lapland.

S. Coulteriana Otth, in Cand., Prodr. I, 368 (1824). — The plant named after T. Coulter has no distinctly specific characters in its short description, nor is it clear what is intended by "flore longissime pedunculato in dichotomia." It is stated to occur "in Ibernia et circa Constantinopolim". The first name is intended for Iberia, not the western Iberia, which is the Spanish Peninsula, but the portion of Trans-Caucasia bounding the Black Sea. Specimens in Herb. de Candolle, at Geneva.

S. maritima (non With.) Host, Fl. Austriaca, I, 528 (1827).

S. angustifolia (non Poiret) Gussone, Fl. Sic. Prodr. I, 500 (1827).

S. Tenoreana Colla, Herb. Pedem. I, 328 (1833); Gren. et Godr. Fl. de France I, 203 (1847); Lojacono, Fl. Sic. I, 149 (1888).

S. inflata var. *littoralis* Rupr., Fl. Ingrica, 159 (1860). — This plant, found at Kronstadt, an island at the head of the gulf of Finland, is stated to have the stems suffused with purple tint; but none of the other characters given separate it from the present variety.

S. Cucubalus var. *lancifolia* Rouy, Excurs. Espagne, 63 (1882).

S. inflata var. *longifolia* Lange, Haandb. Dansk. Fl. ed. 4, 686 (1888).

S. Cucubalus var. *Tenoreana* Rouy et Fouc., Fl. de France, III, 104 (1896).

Var. 2. *latifolia* Reichb. Fl. Germ. excurs. 823 (1832): — f. *communis* *albiflora glauca*.

Folia elliptico-lanceolata obovato-lanceolata vel obovato-oblonga, acuminata, utrinque glauca, vel interdum supra virentia subitus glauca. Flores in dichasio composito, dichasii ramo altero saepe abbreviato, mediani, nisi abortivi, longe, laterales brevius pedicellati. Calyx glaucus, interdum rubens, vel etiam albidus. Styli apice paullo incrassati, haud a basi filiformes.

S. inflata var. α *oleracea* Ficin., Fl. Dresdens, ed. 2, 313 (1822).

S. inflata var. α *vulgaris* Otth. in Cand., Prodr. I, 368 (1824).

S. inflata var. α *vesicaria* Reichb., Fl. Germ. excurs. 823 (1832).

S. inflata var. α *pratensis* Neirl., Fl. Nied, Oesterr. 813 (1859).

S. inflata var. *umbrosa* Blocki in Oesterr. Bot. Zeitschr. 1884, 250. — An authentic example of Blocki's plant in Herb. Kew. is, without doubt, typical *S. inflata*.

S. Capsiriensis Jeanbernat et Timbal, in Trav. Soc. Phys. Nat. Toulouse VII, 53 (1887). — Differs in no way from the common form.

S. cucubalus var. *brachiata* Rouy et Fouc., Fl. de France, III, 104 (1896). — Differs in no way from the common form.

f. *lætevirens*.

Folia utrinque viridia. Pedicelli interdum umbellati.

Hab. This is not an uncommon form, in which the whole plant is bright green. To illustrate its distribution, a few scattered localities are given from various countries. — England : York (*G. Webster*), a somewhat lax state with stems decumbent at the base and patent leaves. France : Pierre-sur-Haute, a hill in the dept. of Loire (*Versanne*), a small state with leaves only 3-4 cm. long; Francheville, in the dept. of Rhône, and Bourgoin in the dept. of Isère (*Gandoger*); Epinal, in the dept. of Vosges (*Berher*). Belgium : Havelange, in the prov. of Namur (*Gandoger*). Spain : Ciudad Real (*Compañó*) and Guadalajara (*Fernandez*), in Old Castile; Soncillo, in New Castile (*Estebanez*). Portugal : Perna de Pau near Lisbon (*Daveau*, Herb. fl. Lusit. ann. 1878). Denmark : island of Zealand (*Jørgenson*), Germany : Stralsund, in the prov. of Silesia (*Felsmann*). Hungary : Budapest (*L. Richter*), a state with umbellate flowers. Russia : Sarepta, in the government of Astrakhan (*Becker*). Greece : Eleusine (*Heldreich*).

Var. 3 *alpina* Mert. et Koch in Røhl. Deutsch. Flora, ed. 3, III, 236 (1831); Koch Syn. Fl. Germ. Helv. ed. 2, 112 (1843); Hausmann Fl. Tirol. 124 (1854).

Planta cæspites graciles formans, pumila, 1-2 dm. Rhizoma inferne lignescens, longum tenué, fibris radicalibus tenuibus albidis. Caules laxe ascendentes, basi obvie decumbentes, superne ramosi. Folia brevia, 2 cm. et minora, glauca patentia acuta apiculata, margine ciliata, ovato-lanceolata ovata vel raro suborbicularia. Flores sæpius solitarii, interdum etiam alter flos lateralis, vel quidem terni, pedicellis gracilibus suffulti. Calyx purpurascens, eleganter reticuloso-venosa. Petala alba vel violacea. Bractæ foliiformes vel scarioso-marginatae. Antheræ violaceæ. Ovarium ovoidum viridulum, ovulis numerosis, 84-108. Styli filiformes, apice leviter incrassati. Semina numerosa, primum castanea demum nigrescentia, granulata (haud tuberculata), faciebus concava, dorso planiuscula.

Hab. Alpine situations in Central, Western, and Southern Europe, where it is common and widely distributed. The description is drawn up from specimens gathered on the Cottian Alps, in which all the minor characters are given which serve to differentiate the plant from the common long-leaved form. The specimens, which are in Herb. Kew., were gathered by Ozanon (*Billot*, Fl. exs. n. 3531) et 1500 m. on detritus of siliceous schist above Beauregard in the department of Hautes-Alpes. With these examples (quoted by Nyman, *Consp. fl. Eur.* 88), I have compared Parlatores description, and other specimens in Herb. Mus. Brit. gathered by Huter at 2250 m. on calcareous soil in the Carnic Alps, near Sexten in N. Tirol. — Mr. H. S. Thompson has recently (23 August 1907) gathered specimens at 2440 m. on the Col du Galibier, in the Alps of Dauphiny, the highest limit of pastures in the Western Alps, and the greatest altitude hitherto recorded for the plant (*Mem. Acad. Geogr. Bot.* 1908, p. 214). — The northern limit of the plant in Europe is the Harz Mtns. in Prussia (*Grisebach*) : I have not seen specimens, and am rather doubtful of the record, though Grisebach lived in this part of Germany. Examples in Herb. Mus. Brit. from Lappland collected by Solander, as *alpina*, do not belong here but rather to *S. maritima*. In a note written on one of Gay's specimens in Herb. Kew. from Mt. Fouly in Valais, he says that the average number of ovules in an ovary is 96, but in an abnormal ovary with five cells he found 116 ovules. The small seeds measured only $4 \times 1 \frac{1}{2}$ mm.

The earliest notice of this plant is by Pontedera, *Compendium Tabularum Botanicarum*, p. 128 (1718). He says it was found in rough places on the highest parts of Mt. Baldo, in the Venetian Alps, and describes the plant as follows : — " Radices exiles, longiores, et albas inter rudera demittunt, " circum reptante, caulinco semissem longo. Huic folia nascuntur bina " et bina, ac parva, lata in exortu, circa finem contracta in acumen. Flores " albi in illa, in hac purpurascentes (qua tantum varietate internoscun- " tur) prodeunt ex foliorum alis magno calyce obvoluti, qui calyx sub- " purpureis punctis eleganter inscribitur. Hic fructum complectitur, " conicum, apice dehiscentem, et semine foetum parvo, ac cinereo." The specific phrase which he applies to the newly discovered plant is " *Lychnis alpina*, repens, saxatilis, quæ Behen album vulgo, foliis latius- " culo, et breviori." Allioni gives a good figure of the plant, with analytical dissections, in *Rarior, Pedemont. Stirp.* p. i. 83, t. v. f. 3 (1755), and a long involved description, in which he says the plant was discovered by Dr. Julius Pontedera; and says that it is more frequent in the Waldensian Alps than elsewhere. Linnaeus does not mention the plant, nor is there an example of it in his Herbarium.

Cucubalus alpinus Lamk., *Encycl. Meth.* II. 220 (1786). — The short Latin diagnosis here given is. — " pedunculis erectis unifloris, petalis bipartitis subappendiculatis, foliis lanceolatis glaucis laevisibus." Stated to be found on the Alps of Switzerland and Italy.

Cucubalus Behen var. β , *Vill.*, *Hist. Pl. Dauph.* III. 613 (1789).

S. uniflora var. β , *Cand.*, *Fl. Franc.* IV. 747 (1805). — Gives the previous plant only as a synonym.

Cucubalus Behen var. *rotundifolius* Pes., *Syn. Plant.* I. 495 (1805). — Founded on Allioni's figure mentioned above.

C. glaucus W., *Enum. Plant. suppl.* 24 (1813).

C. montanus Vest in *Flora*, 1821, 149.

C. rotundifolius Steud., *Nomencl. ed.* I, 243 (1821).

S. inflata var. γ *uniflora* Otth in Cand., Prodr. I. 368 (1824). — Humilis, glabra, floribus solitariis raro geminis aut ternis.

S. inflata var. *prostrata* Gaudin, Fl. Helvetica, III. 164 (1828).

S. Willdenowii Sweet, Hort. Brit. ed. 2, 51 (1830).

S. inflata, varr. β , ϵ , *glaucia*, *chlorophylla* Reichb., Fl. Germ. excurs. 823 (1832).

S. Persoonii Schott ex Reichb. I. c. (1832).

Cucubalus crassifolius Tenore, Viagg. Abruzz. 67 (1832).

S. alpina Thomas, Cat. pl. Suisse. 45 (1837). — Also kept up as a species in Gren. et Godr., Fl. de France, I. 203.

Cucubalus Persoonii Spreng. ex Steud., Nomencl. ed. 2, I. 451 (1840).

S. uniflora var. γ , Bertol., Fl. Italica, IV. 633 (1841).

S. inflata var. *microphylla* Boiss., Fl. Orientalis, I. 629 (1867).

S. commutata var. *microphylla* Boiss. I. c.

S. Cucubalus var. *alpina* Rohrb., Monogr. gatt. Silene, 87 (1868).

S. maritima var. *alpina* Ces. Pass. Gib., Comp. fl. Ital. 795 (1870).

S. brachyantha Schur, Reiseb. ex Linnaea. 1870, 259.

S. Cucubalus var. *microphylla* Haussk., Symb. fl. Graec. 23, ex Mittheil.

Thüring. Bot. Ver. 1893, 42.

S. alpina var. *Baldaccii* Terracc., in Malpighia, 1893, 68.

S. inflata var. *punciflora* Beyer, Beitr. fl. Gris. et Rhêmes, 16 (1893).

S. megalosperma Sartori in Sched. Heldr. Herb. Graec. norm. n. 1215 (1894).

S. Cucubalus var. *ambigua* Rouy et Fouc., Fl. de France, III. 108 (1896).

S. alpina var. *auriculoides* Murr in Deutsch. Bot. Monatschr. 1898, 62.

S. venosa var. γ *megalosperma* Halacsy, Consp. fl. Graec. I. 160 (1900).

— Folia 15-25 mm. Semina submajora.

f. *rupicola*.

Folia 2 cent., viridia ovato-lanceolata utrinque verruculoso-punctata. Calyx fructifer 14-16 mm. Styli filiformes, apice haud incrassati. These differential characters are taken from authentic specimens in Herb. Kew. collected by Puget at Mageriaz above Annecy-le-Vieux, in the department of Haute-Savoie, growing on serpentine rocks. The plant has also been found in the depts. of Haute-Vienne, Nièvre, Saône-et-Loire, Isère, Basses-Pyrénées, and Pyrénées-Orientales. The stems vary from 8-15 cent.

Syn. *S. rupicola* Boreau, Fl. Centr. France, ed. 3, II. 95 (1857).

Var. 4 minor *Moris* Fl. Sardoa, I. 246 (1837); Gren. et Godr. Fl. de France, I. 203 (1847).

Humilis, Caules 1 $\frac{1}{4}$ -2 $\frac{1}{4}$ dm., plurimi. Folia angusta linearia acuta. Flores solitarii, vel interdum cyma triflora. Petala vix calycem superantia. Styli apice haud incrassati.

Described from Gay's authentic specimens in Herb. Kew.

Hab. France: Châtillon-sur-Seine, in the dept. of Côte-d'Or (*Godron*), the northern limit of the plant, Angers, in the dept. of Maine-et-Loire (*Génevier*), the western limit of the plant, — and probably elsewhere. Switzerland: the plant was first discovered by Nocca near the hamlet of Pregola on the schistose hill of Groppetto, in the canton of Ticino, on rough soil among stones in company with *Aethionema saxatile* and also *Armeria plantaginea*. Italy: the Lepontine Alps (*Bertoloni*), on high rocks between Amalfi and Vietri above the gulf of Salerno (*Levier*), and in Sardinia at 1100 m. (*Moris*).

Cucubalus angustissimus Nocca et Balbis, Fl. Ticinens. I. 499, t. 7 (1816).

— A very good figure of the form of *S. inflata* with narrowest leaves.

The original description is, — " Caule ramoso piloso, foliis linearibus acutis margine ciliatis, petalis semibifidis vix calycem superantibus." It is a plant of quite different aspect from var. *angustifolia*, even the very narrow-leaved states of that variety, and is at once distinguished by the pubescent stem and leaves. Plant less hairy and flowers larger than in the Sardinian plant.

S. linearis (non Decne.) Sweet, Hort. Brit. ed. 2, 51 (1830).

S. angustissima Boreau, Fl. Centr. France, ed. 3, II. 95 (1857).

S. Cucubalus var. *angustissima* Rouy et Fouc., Fl. de France, III. 104 (1896).

Var. 5 *pubescens* Cand. l. c. (1805).

Folia elliptico-lanceolata obovato-lanceolata vel obovato-oblonga, acuminata, inferiora elliptico-ovata, margine aspero-ciliata. Petala alba vel rosea, saepe calyce parum longiora.

The original description is, — " ses feuilles et le bas de sa tige sont garnis de petits poils courts ". The calyx is sometimes pubescent with the teeth stiffly ciliate; but in English specimens the calyx seems to be always smooth and glabrous.

Cucubalus maritimus Lamk., Encycl. Meth. II. 220 (1786). — The plant here mentioned is not *S. maritima* With.; for both the Latin diagnosis (foliis cauleque villosis) and the French description (feuilles chargées de poils courts) show that it is this variety of *S. inflata*.

C. Behen var. *scaber* Schleich., Cat. Pl. Helv. exs. (1815).

C. Antelopum Vest in Flora, IV. 149 (14 März 1821). — " A *Cucubalo* " *inflato* diversus. Caulis scaber subsulcatus. Folia 25 mm. et ultra, lata " ovato-oblonga, etiam sub dichotomia sat magna subtus scabriuscula " insigniter glauca, internodia excedentia, summis dichotomiae reliquis " conformibus." The description is founded on specimens gathered on Mt. Baba, of the Carpathian range. The author says that the leaves are exactly like those of *Polygonatum latifolium*. By the native Ruthenes it is called " skerpez ", and is eaten by the chamois (hence the proposed specific name).

S. Antelopum Steud., Nomencl. ed. 2, I. 450 (1840).

S. Fischeri Steud., Nomencl. ed. 2, II. 584 (1841).

S. crispata Steven in Bull. Soc. Nat. Mosc. XXIX. I. 345 (1856).

S. puberula gord. ex Boreau, Fl. Centr. France, ed. 3, II. 94 (1857).

S. inflata var. *puberula* Syme, Engl. Botany, ed. 3, II. 56 (1865).

S. inflata var. *ciliata* Lange, Pugill. Plant. 306 (1865).

S. Cucubalus var. *Bosniaca* G. Beck, in Ann. Hofmus. Wien. VI. 333. (1891).

Var. 6 *marginata* Maly Enum. Pl. Austriac. 307 (1848).

Planta cæspites graciles formans, pumila, 1-2 dm. Folia brevia lata subrotundato-ovala breviter mucronata, margine incrassato-durescente cartilagineo serrulato-ciliata vel denticulato-setosa. Petala calycem vix superantia, subinclusa vel quidem inclusa, lobis brevibus angustis. Styli filiformes, apice leviter incrassati. Semina numerosa. Faciebus concava, dorso planiuscula.

Hab. The Pyrenees, on both the French and Spanish side, the Alps of France, Switzerland, and Italy, Mt. Velebit in Croatia, and the spur of the Dinaric Alps in Herzegovina. This form was first described from specimens collected by Kitaibel on the mountains in the south part of Croatia. In Herb. Kew. there is a plant labelled " *S. inflata* var. *surculifera* " from Gay, which he collected in 1809 on the Pennine Alps of Valais, above

Zermatt, and which exactly agrees with the description given by Rohrbach (Monogr. p. 87). Some Pyrenean specimens in herbaria labelled "alpina" also belong here, which have short leaves pubescent on both sides.

Cucubalus marginatus Kit. ex Schultes, Oesterr. Fl. ed. 2, I. 674 (1814).
S. microloba Schott in Anal. Botanica, 59 (1854).

Varietates excludendæ.

S. inflata var. *cæsia* Baldacci (1894) = *S. cæsia* Sibth. et Smith (1806).
S. inflata var. *fabaria* Otth (1824) = *S. Thorei* Dufour (1825).

S. inflata var. *maritima* Otth (1824) = *S. maritima* With. (1796).

S. inflata var. *petræa* Fries (1842) = *S. maritima* var. *petræa* Rouy et Fouc. (1896).

S. inflata var. *Athoa* (1843) = *S. commutata* Guss. (1827).

S. inflata var. *Balcanica* Velen., Fl. Bulgaricæ suppl. 37 (1898). — This is a tall plant with the middle leaves cordate, which I can not distinguish from the last, to which it should be transferred.

S. inflata var. *alpina* Tenore, Syll. Plant. vasc. Fl. Neapol. 210 (1831), non Mert. et Koch (1831) = *S. commutata* Guss. (1827).

S. inflata var. *minor* Gaudin, Fl. Helvetica, III, 163 (1828), non Moris (1837) = *S. glareosa* Jord. (1852).

Of the 16 varieties enumerated by Gürke in Richter, *Plantæ Europææ*, II, 286 (1899), two belong to *S. commutata*, one to *S. glareosa*, and the remaining 13 are distributed among the six varieties described in this paper. Successive compilers of plant-lists seem to outvie one another in the endless changes of name which they propose for this species (one of the most common European plants), though several of the names are barred, by inability to survive Prof. Schinz's elusive interpretation of the posthumous influence of "totgeborenen Namen".

The name of *Silene inflata* for the white-bottle is in all but universal use, and has been so for 108 years, and is therefore here kept up. It has the further advantage that, as far as the European forms are concerned, there has been no necessity in this paper for proposing new combinations in varietal names.

In the English Midlands the average date of flowering is 6 June.

Insect Visitors to S. inflata. — Platychirius manicatus, Cordylura, Anthomyids, Eristalis pertinax, Chortophila (Elliot Fl. Dumfriesshire, p. 23, 1896), also Noctuidæ, but rarely Bombus (*Poppius* in Act. Soc. Faun. Fl. Fennicæ. XXV, n. 4, 1903).

Fungi which attack the species. — According to Saccardo, the stem, the leaves, and the flower are subject to mycological parasitism : — 1. The stem, by *Helotium fumigatum*, *Phomamelandi*, *Pleospora herbarum*, *Puccinia Silenes*, *Schizothyrium cornubatum*, *Uromyces Behenis*, 2. the leaves, by *Marsonia Delastrei*, *Peronospora Dianthi*, *Ramularia didymaroides*, *Septoria Sapponariæ*, *Uredo Cucubali*, 3. the flower, by *Sorosporium Sapponariæ*, *Ustilago violacea*.

